

Actual non-confidential email thread

From: Driessen <jd@driessenlaw.com>

To: cdcfiber@aol.com

Sent: Mon, Jan 4, 2010 8:19 pm

Subject: Re: Now Introducing The Wireless Investigative Report

First, I read very carefully; that is my job.

For two, you are like a political pundit, only looking to the worst examples of the technology and painting with a broad brush.

If your ?spam? group mail (from an email list hijacked from the NTIA/RUS) was any indicator of the type of information you were going to include in your supposed "wireless investigative report," than you are simply spinning misinformation.

Put yourself to the test. Go out today and buy a Netgear, Linksys, or D-Link home residential gateway running 802.11n MIMO (probably around \$100). The one in my home delivers HDTV (NAS stored movies and HD slingbox) wirelessly from up to three different sources -- to up to three different clients simultaneously without jitter. I can also show you how MIMO technology also allows for nomadic and roaming ability within a wifi cloud. Our local government entity has set up its own three node ?test mesh? cloud and can demonstrate mobility from inside a moving automobile with an over the shelf laptop running the 802.11n intel mobility driver on the client side. Our goal was removing the hype about mobility in wireless -- and we accomplished that.

We can also tell you all about the benefits and pitfalls of Wi-Max. Unless you are totally naive, you are also well aware that even fiber networks use gigabit point-to-point microwave hop with OFDM to tie many of its last mile projects together.

Now my point for you (in case you were not reading my previous comment carefully) is that you are doing more harm than good for your industry if you are not thinking "convergence." Instead of trying to pick one technology (802.16e) and then painting everything else with a broad brush, you should be out there touting how fiber ties it all together. Fiber can never be replaced by wireless.

But then remind me, how is it that fiber is ever going to solve mobility?

Your email did not ring true. Even while vacationing this weekend, using only my 3G smart phone -- on top of the mountain at a ski resort in Utah ? 1 Mbps was not bad at all. Back at the cabin (which had no copper, cable, or fiber) using a state of the art codec, I was able to stream a short HD movie

at 2 Mbps (with better quality than what the satellite people call HD) from my phone tethered to a laptop to a 1080p screen -- granted it had to buffer half the time (1 Mbps ? 2 Mbps stream) but when it played, it was tremendous. And that was over the internet -- imagine a local head-end data offload system fed by fiber that could then tie into the mobility cloud.

It is true: I am questioning your journalistic biases. Stop damaging the same industry you claim to be supporting and then maybe I will think about ordering your "investigative" report.

----- Original Message -----

From: cdcfiber@aol.com

To: cdcfiber@aol.com

Sent: Monday, January 04, 2010 9:39 AM

Subject: Now Introducing The Wireless Investigative Report

Lawyer Driessen,

Reread the letter. We acknowledge the many benefits of wireless. The problem, as you agree, is that wireless is hyped well beyond what it can do when it comes to providing broadband. Wireless will never compete with fiber in providing the bits and as applications become more dense people stuck only with wireless with nothing to download it to are going to be like people today with dial up connections.

Also, please remember. I have been an objective journalist for nearly 30 years. If wireless broadband really can compete with broadband services such as FTTH and HFC we will duly report it. But right now it is getting a free ride and people in charge of making national broadband policy are giving it a role that will leave us even farther behind than we are now or crash the network entirely.

Up to one or two Mbps may be fine when we are riding in a car, but you are not going to get fast Internet or videoconferencing or HDTV or any of numerous other broadband services over it when you are in your office or home. There you are going to need an FTTH or at least a very good HFC connection to operate effectively.

David Chaffee

The Wireless Investigative Report

-----Original Message-----

From: Driessen <jd@driessenlaw.com>

To: cdcfiber@aol.com

Sent: Mon, Jan 4, 2010 8:19 pm

Subject: Re: Now Introducing The Wireless Investigative Report

Why on earth would I pay money for bias propaganda supporting fiber as the only workable broadband solution? I am with you about the wireless hype, but guess what? Fiber will never be mobile!

Here at the Dixie Technology Funding Agency, we love fiber and will definitely use it in our network architecture, but "last mile fiber" is simply an oxymoron in today's mobility world.

You had better start getting on board with talking the "convergence" game, or I do not want anything to do with your so-called "Wireless Investigative Report" Instead of telling us "why not wireless" how about telling us why fiber is the most substantial ingredient to effective broadband deployment and local data-offload for mobile networks.

get with it man!

----- Original Message -----

From: cdcfiber@aol.com

To: cdcfiber@aol.com

Sent: Monday, January 04, 2010 9:39 AM

Subject: Now Introducing The Wireless Investigative Report

The Wireless Investigative Report

January 4, 2010

Dear Executive:

National communications policymakers continue to hope for wireless broadband. How much easier their lives would be if everything magically flowed through the airwaves at low cost, high bandwidth.

Sounds nice, but to this point it is nothing more than a bright shining lie. Unfortunately, it is a lie that has captivated national policymakers, potentially to the detriment of America's broadband future.

Wireless is a very handy technology. We all benefit from its seeming omnipresence whether it be to work off a wireless LAN in the office or at home or accessing a variety of applications at the local

library or bookstore.

But, at least until now, it would be an enormous mistake to believe that wireless should be delivering any kind of significant broadband. The reason we can instantly communicate with people in the next town or halfway across the world, including on wireless devices, is because of the wireline services that largely do the heavy lifting, and that largely means fiber optics.

In fact, wireless proponents have spent well over \$1 billion attempting to demonstrate that significant amounts of broadband information can be sent through the air. They have called it "virtual fiber" and have promised major cities like Philadelphia and Seattle that they would connect them with all the bandwidth they need. They have failed miserably and those cities are now desperately attempting to go to fiber.

### Separating The Hype from The Reality at Clearwire

Now comes the latest wave of wireless broadband claims. Some Clearwire trials already are claiming up to eight megabits over limited distances using LTE, or long-term evolution. Until we see it on the marketplace, we are skeptical. But The Wireless Investigative Report promises to evaluate each claim fairly and accurately. If such claims are valid, we will be the first to confirm them.

While it is up to its neck in financing and over-financing, Clearwire says it has made great gains. While Seattle program managers tell us wi-max was not the answer for the city's communications needs, Clearwire says it is offering service to 3.1 million people in the Puget Sound area, which includes Seattle, at prices as low as \$25 per month. Clearly, something is not kosher.

Not only that. Clearwire in fact claims it serves 30 million people in 25 markets in America. Interesting. Our offices are in the Baltimore vicinity and we have not heard how we may be "served" by Clearwire. We have no idea what the data rates are, how close you have to be to a cell tower, or what the costs are. We do not feel "served," no matter what the advertising says.

The Wireless Investigative Report will attempt to separate the fact from the fiction here. Is Clearwire really delivering as it says it is? How much revenue is Clearwire generating as compared to its expenses? How many customers does it have? What data rates is it offering and how close do you have to be to a cell tower to receive them? How can Clearwire be successfully getting off the ground with its 4G technology when a far more credible carrier, Verizon, says it will take until 2013 before it can fully offer 4G?

### An FCC Chairman That Needs to Know Better

Surprisingly, FCC Chairman Julius Genachowski, who has stressed technology neutrality in all major telecom decisions, has broken his own rules to be an unabashed supporter of wireless broadband despite the seemingly unresolved questions. "Broadband is the future of mobile and mobile must be a critical part of our broadband strategy," said Genachowski, who opined that "there may be no greater spur to our global competitiveness than getting this right."

What? At its best, mobile broadband offers a few megabits per second while nations such as Japan and Korea already are offering tens of megabits to the majority of their citizens. And America must "get" mobile broadband right for the sake of our global competitiveness? If we read this correctly, it is hard not to believe that Genachowski is damning the United States to back-of-the-bus status in the global broadband race.

The Chairman went on to note that, "For the next decade and beyond, the mobile revolution can be a major driver for job creation, growth and innovation. Our commitment to mobile broadband will determine just how much of this promise America realizes." The Chairman did not explain why America should commit to an admittedly important secondary technology when fiber optics—which unites the world for global broadband—apparently was not worth his comments.

From a fiber optics perspective, the burgeoning amount of data being sent over wireless in terms of instant messages, voice messages, e-photos, e-videos, emails, etc, is good news. All of this data must be downloaded, and generally quickly, to a pipe. And the more data, the larger the pipe, and that often means fiber optics. Many in the wireless community actually support the idea of fiber optics to cell towers to carry this traffic.

### A Wireless Recipe for Disaster

However, what is potentially scary and disruptive are claims by some in the wireless community that wireless can also handle this backhaul traffic. The potential for disaster here is very real, and without enough actual capacity to carry these increasingly heavy loads the entire network runs some risk of crashing. It is scenarios such as this that lead Michael Lebby, executive director of the Optoelectronics Industry Development Association, to believe that such a crash is inevitable. In short, The Wireless Investigative Report intends to find out if the wireless industry really knows what it is doing here.

For whatever reason, national broadband policymakers have bought into what we see as the myth of wireless broadband. The result already has been the establishment of a broadband standard in America that is embarrassingly low at 768 Kbps, recently up from an even more embarrassingly low 200 Kbps. Fiber optics can deliver tens of megabits of bandwidth. Yet our nation is stuck in a trough of embarrassingly low broadband expectations as our national policymakers attempt to be

?accommodating? to wireless.

As other nations rush to put fiber optics into their networks, America appears transfixed by the idea that wireless broadband will come to our rescue. To this point, as any telecom engineer will tell you, it won't. And it will take some time before it does, if it ever will.

The Wireless Investigative Report will study whether this wireless broadband Low Road that American policymakers seem bound and determined to put us on is feasible. We keep hearing from engineers more knowledgeable than us that not good things happen when a signal is in the air, while it is generally safe and secure when traveling through a wire.

But perhaps 4G, or Long-Term Evolution, will solve that.

American broadband policymakers appear enmeshed in a combination of wireless hype and the need to try to justify the fact that they don't have the wherewithal to build a network that will really compete at the international level. The result is a lot of wishful thinking about where wireless broadband can and will take us.

The very real fear is that the United States will take its eye off the ball and stop pushing for the real high-end broadband that fiber optics can now offer. It is not inconceivable that America could find itself close to where it now is four years from now still waiting for LTE, that would put the United States four years farther behind other nations in the global race to broadband.

The Wireless Investigative Report?A Sanity Check

Whatever happens, Americans have the right to know what they are getting and what is bogus and that is the goal of The Wireless Investigative Report,

Every week, alternating with full issues and blogs, you will get the latest on wireless broadband technology. Let us help you separate the fact from the fiction. Let us help you decide what role wireless broadband should play in America's future.

Every week you will get the objective information you need to decide how real wireless broadband is. Let us be your eyes and ears as we dig into Clearwire, Verizon LTE and other 4G hot button issues.

Now is your chance to get the hard, objective information on wireless broadband that you need to make informed decisions. Our no-nonsense look will help you know exactly where wireless broadband is and where it needs to go.

Unlike so many wireless publications, which swallow up the broadband hype without a second thought, we will ask the hard questions: Why has wireless broadband been such a failure to this point? How is anything new coming out going to change that?

With The Wireless Investigative Report you will know every week whether there has really been any progress in wireless broadband or whether it is just more talk, talk, talk.

Yes, the wireless industry is now heavily financed. Yes, it has the ear of the nation's primary broadband policymakers. But the real question is whether it has the goods to deliver what it says it will to a nation struggling to get the broadband it so desperately requires to be competitive.

Somewhere along the line the wireless industry began believing its own press clippings. Instead of staying as a provider of terrific low-end applications, it decided to tell people it could provide real broadband services. By doing so, some believe it was ignoring basic physics that the air is not a good place to transmit major megabits through. Instead of making the most out of its considerable capabilities, it has decided to go to a bridge too far.

Now it has the potential to cause real damage as America is in a vulnerable position. If we believe some pipe dream about a technology that may deliver 10 Mbps or above several years from now, and it does not, we run the real risk of permanently being a second-rate broadband power.

This will be your neighborhood when you order The Wireless Broadband Report. We are tired of the hype when it comes to wireless broadband. If you have it, prove it. If you don't, stop misleading America.

Every issue we will review what the wireless industry is saying it can do?and then touching base with reality.

This is more than just a redistribution of the money wireless now is making in order to see if it can make more through questionable claims. This is America's broadband future and we better be very sure that we are saying and doing is accurate.

Order Now to Get Our Best Offer

Get your truth and wireless reality check each week, delivered electronically to your email address, for our special one-time charter price of \$347. That's not enough, and the offer will last only through Jan. 31, when it will go up appreciably higher and not come back down.

But we believe in this product and we want to give it every chance to correct the misleading

information out there. So hop on board as we find out what wireless broadband technology is really like.

To subscribe, contact us for Paypal or bank transfer service, or send check to Chaffee Fiber Optics, 3611 Morningview Court, Ellicott City, MD 21042.

Can you afford not to know what is going on in broadband wireless and how it is impacting federal decision-making? We think not.

Sincerely,

David Chaffee

The Wireless Investigative Report